

## **CITY OF LEBANON IMPACT FEE UPDATE 2016:**

### **School, Recreation, Police and Fire Department Impact Fees**

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Prepared for:

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## Executive Summary

This report provides an updated basis for impact fee calculations for Lebanon school, recreation, and police department capital facilities, and introduces a new fire department impact fee for consideration. The proportionate basis for each assessment and the related capital costs have been update to reflect conditions as of 2015. The revised impact fee schedule is summarized in the chart below. Fees are assessed per square foot of living area for residential uses and per square foot of gross floor area for other uses. Assessment and administration of impact fees is governed by Section 213 of the Lebanon Zoning Ordinance.

### Lebanon Impact Fee Schedule - 2016

Structure Type or Use	Impact Fees Per Square Foot - 2016 Update				
	Schools	Recreation	Police Dept	Fire Dept	Total
<b>Residential Development</b>					
<i>Per Sq. Ft. Gross Living Area</i>					
Single Family Detached	\$1.15	\$0.65	\$0.23	\$0.22	\$2.25
All Other Housing Units	\$1.02	\$0.93	\$0.32	\$0.43	\$2.70
<b>Non-Residential Development</b>					
<i>Per Sq. Ft. Gross Floor Area</i>					
Retail, Restaurants and Lodging	---	\$0.12	\$0.27	\$0.29	\$0.68
Offices and Commercial Services	---	\$0.21	\$0.13	\$0.19	\$0.53
Industrial, Transportation, Whse, Communic.	---	\$0.09	\$0.07	\$0.11	\$0.27
Nursing Homes & Licensed Care Facilities	---	\$0.06	\$0.04	\$0.37	\$0.47
Other Institutional Uses	---	\$0.06	\$0.27	\$0.29	\$0.62

In brief, the capital cost basis for each of the fee categories may be summarized as follows:

- The school impact fee assessment reflects the cost of the most recently constructed school facility in Lebanon (the Middle School for grades 5 through 8) and the proportionate demand on its capacity from an average housing unit.
- The recreation impact fee is based on recovery of a proportionate share of City capital expenditures from the year 2000 forward for selected projects that are part of the 1998 Recreation Master Plan.
- The police department impact fee is based on the recoupment of a proportionate share of the cost to develop the Lebanon police station and its communications system. The size of the facility has remaining capacity to support new development.
- The fire department impact fee represents a proportionate share of the cost to provide the major vehicles and apparatus that are required to serve existing and future development in the City for a horizon year of 2040.

The periodic review and adjustment of the fee schedules is both necessary and desirable to ensure that fees are equitably assessed over time, and that the fees reflect capital facility cost assumptions that are reasonably commensurate with actual City capital investments. The impact fee assessments are structured to allow for future adjustments in the variables of each fee basis. Other impact fee categories may be added in the future for other capital facility categories.

## Introduction

Impact fees are authorized under New Hampshire RSA 674:21, V and enabled within the City of Lebanon by the Lebanon impact fee ordinance (Section 213). This impact fee analysis provides a basis of assessment for public schools, recreation and public safety impact fees in the City. The report updates and builds on earlier studies of impact fee potential completed by BCM Planning, LLC from 2006 to 2013.

In their review of prior work by BCM Planning, the City Council and Planning Board have directed that the City's impact fees should be based on realistic levels of capital investment, supported either by evidence of actual appropriations or past investment levels, expenditures intended to implement an adopted long term plan, or projects that comprise part of the Capital Improvement Program (CIP).

In this context, BCM Planning, LLC has assumed that the most supportable basis for impact fee assessment in Lebanon should reflect: (1) evidence of actual progress in appropriations to fund related capital facilities; (2) existing or planned facility capacity adequate to serve the demands of new development; and/or (3) specific indications from long-term facility plans or the CIP that such investments are forthcoming.

Other categories of impact fee assessment may also be supportable where there is sufficient documentation of available capacity to support new development (either existing or to be created) and where there is a high probability that related capital investments will be completed.

As stated in prior reports by BCM Planning, other forms of investment fees, system development charges, or other capital cost assessments for *public water, sewer or storm water facilities* should be implemented under the authority of utility ordinances, rather than through the impact fee provisions of the zoning ordinance. New Hampshire RSA 149-I provides statutory authority for sewer and storm water system assessments, and RSA 38 authorizes assessments for water utilities. Fees for utility infrastructure are typically charged to users as they connect to a utility system, or when they increase the size of their service connection. In contrast, impact fees assessed under RSA 674:21, V are applied to new development through the land use regulatory process.

## Part A: Public School Impact Fee

In 2009-2010, a public school impact fee was developed based on conditions that included:

- Evidence of ongoing investment in the quality of school facilities that would provide adequate space for the educational program;
- Anticipated improvements that would address existing deficiencies in school facility space per pupil at reasonable spatial standards;
- Indications that adequate capacity would be created to serve the needs of existing enrollment as well as enrollment from new development; and
- Development of a basis of assessment that can be updated periodically and adjusted to reflect proportionate demand on school capacity from average housing units.

### 1. School Facilities

Since the last school fee update was prepared, the Lebanon School District completed the construction of a new grade 5-8 middle school (2012) which was designed to accommodate at least 600 students. The new school enabled the District to move grades 5 and 6 from an older facility to the new middle school. That change helped open up more space for grades K-4 and pre-school students in the City's two elementary schools, enhancing capacity and quality within the K-8 system. Table 1 below illustrates current grade configurations and estimated capacity of the local schools.

**Table 1**

Lebanon Public School Facilities								
School Facilities	Year Built	Grades Served	Site Acreage	Building Area Gross Sq. Ft.	Pupil Capacity **	Square Feet Per Pupil Capacity	11/20/15 Enrollment	2015 Enrollment as % of Capacity
<b>ELEMENTARY SCHOOLS</b>								
Hanover Street Elementary *	1952	Pre K-4	shared with LHS	54,223	418	130	363	87%
Mt. Lebanon Elementary *	1953	Pre K-4	5.3	32,665	323	101	238	74%
Total Elementary (Pre K-4)		Pre K-4	5.3	86,888	741	117	601	81%
<b>MIDDLE SCHOOL</b>								
Lebanon Middle School (5-8)	2012	5-8	30.0	105,578	600	176	455	76%
Total for Pre K-8 Facilities		Pre-K - 8	35.3	192,466	1,341	144	1,056	79%
<b>HIGH SCHOOL</b>								
Lebanon High School	1958	9-12	35.8	102,382	818	125	604	74%
Total Facilities in Service		K-12	71.1	294,848	2,159	137	1,660	77%
* Students in Pre-K programs included in enrollment totals. Capacity generally computed based on K-4 classrooms								
** Estimates of capacity of existing schools and planned middle school based on interviews with former Superintendent Michael Harris (2006 and March 2010)								

The new middle school and the related changes in grade configuration allowed the oldest schools in the system (Seminary Hill School and the Lebanon Junior High School) and five modular classrooms on those sites to be retired.

The construction of the Lebanon Middle School resulted in an increase facility space available to K-8 students. Prior to construction the K-8 system provided 117 square feet per pupil capacity; after completion of the construction the average floor area is 144 square feet per pupil capacity. The improvements were of benefit to new development as they enabled expanded facility capacity, and a higher spatial standard per pupil, while improving and modernizing the facilities available to all students.

Lebanon resident pupils comprise about 81% of the total enrollment in local schools. Students from other area towns attend the middle school and high school in Lebanon. (See Table 2.) However, the impact fee for Lebanon must be based solely on resident enrollment and its proportionate demand on school facility space.

**Table 2: 2015 Enrollment in Lebanon Public Schools**

**Total Public Enrollment**

School	Grades	Resident	Other	Total	% Resident
Hanover St School	PS to 4	359	2	361	99.4%
Mt. Lebanon Elementary	PS to 4	236	2	238	99.2%
Lebanon Middle School	5 to 8	387	68	455	85.1%
Lebanon High School	9 to 12	366	238	604	60.6%
Total	PS to 12	1,348	310	1,658	81.3%

**K-12 Enrollment Only**

School	Grades	Resident	Other	Total	% Resident
Hanover St School	K to 4	343	2	345	99.4%
Mt. Lebanon Elementary	K to 4	215	2	217	99.1%
Lebanon Middle School	5 to 8	387	68	455	85.1%
Lebanon High School	9 to 12	366	238	604	60.6%
Total	K to 12	1,311	310	1,621	80.9%

(Note: the above tabulation was developed using enrollment data by town of residence as provided by the School District. Some out-of-town addresses for the elementary schools may represent students moving to Lebanon but located in another town at the time the data was collected.)

## 2. Resident Enrollment Ratios

An impact fee system for public schools should rely on the most accurate ratios of enrollment per unit or per square foot to assure proportional assessments. To this end, BCM Planning, LLC prepared a detailed analysis based on 2015 data that matched the number of resident students (by grade level) to the characteristics of the housing they live in based on City property assessment data. (The last full update of Lebanon resident enrollment ratios using this technique was conducted in 2009 by BCM Planning.)

This process yields a detailed cross-tabulation of the number of students by grade level by structure type, age of housing unit, and living area that reflects the local characteristics of the City of Lebanon. After excluding age-restricted housing from the calculations, enrollment ratios were computed by grade level by type of housing structure. Averages were then computed to estimate public school students per

dwelling unit and per square foot of living area. Using estimated occupancy rates from the American Community Survey 2010-2014 data sample for Lebanon, further adjustments were made to estimate enrollment in *occupied* units.

Table 3 compares the results of the 2015 analysis to the ratios developed in 2009. The data indicate that among single family detached units, enrollment per housing unit and per 1000 square feet of living area has declined significantly since 2009. However, the ratios for all other housing units (attached, duplex, multifamily and manufactured housing combined) have remained about the same.

**Table 3**

Lebanon Public School Enrollment Ratios: 2009 and 2015 Studies				
	Estimate Per Occupied Unit		Est. Per 1000 Sq. Ft. Living Area	
Study Year	2009	2015	2009	2015
<b>K-12 Enrollment Ratio</b>				
Single Family Detached	0.396	0.304	0.249	0.174
All Other Structure Types	0.142	0.148	0.158	0.155
Average All Structure Types	0.253	0.214	0.216	0.167
<b>Grade 5-8 Enrollment Ratio</b>				
Single Family Detached	0.130	0.090	0.082	0.051
All Other Structure Types	0.043	0.043	0.048	0.045
Average All Structure Types	0.081	0.063	0.067	0.049
Source: Estimates by BCM Planning, LLC using enrollment data by address matched to property tax assessment data in 2009 and in 2015. Multipliers adjusted to housing occupancy ratios indicated by 2010-2014 ACS sample data.				

Enrollment ratios were computed two ways: (1) per unit and (2) per 1000 square feet of living area for comparison. The City's current assessments are based on living area. Consequently, enrollment ratios per 1000 square feet of living area, by structural category, are used to define proportionate demand on school space from average housing units in Lebanon.

### 3. School Facility Space Standard

Attributable school development costs are estimated by assigning an average school floor area per pupil capacity by grade level. The current configuration of school facilities (excluding preschool pupils) represents the following average school space per pupil capacity:

Elementary K-4	117 (sq. ft. per pupil capacity)
Middle School 5-8	176
Combined K-8	144
High School 9-12	125
All Facilities K-12	137

The average consumption of facility space by Lebanon dwelling units (excluding age restricted housing) is then computed by multiplying the estimated number of pupils per 1000 square feet of living area by the school floor area standard per pupil capacity.

#### 4. Capital Cost of Facilities

The new (2012) Middle School was entirely new construction representing a total cost of \$23.65 million for a facility with 105,578 square feet of finished space (\$224 per square foot in 2012 not including land acquisition). Adjusting this cost to 2015, using an R. S. Means adjustment factor, yields a value of \$240 per square foot which has been applied in the fee calculation for Middle School space.

In the school impact fee model, we have illustrated the *potential* impact fee amounts if facilities for elementary (K-4) and high school (9-12) grades were part of the fee basis. These are shown for illustrative purposes only. The related capital cost elementary and high school facilities are assigned using generic construction cost allowances for buildings and systems only, relying on NH Department of Education 2015 cost allowances for building construction and systems used in the State Building Aid program. These cost allowances do not factor in the cost of land, site preparation, parking, athletic facilities, or furnishings. As such these allowances will tend to underestimate the comprehensive cost of school facility development for these other grades.

In the impact fee basis, the net local cost to the Lebanon School District is estimated by deducting from the gross capital cost the proportion of principal costs supported by State Building Aid as applicable to the particular facilities of the School District. This reduces the effective capital cost assigned to new development so that it reflects the capital cost borne by the City, net of State Building Aid.

The District has indicated that the Middle School project benefits from 44.1% State Building Aid reimbursement of principal costs. At the time of the last impact fee update (2009-2010), the District was anticipating Building Aid at a lower 32.5% share. This means that the net local capital cost for the school is lower than originally assumed, resulting in a reduction in the local share of capital costs that can be recovered from the impact fee.

The combination of the above factors (pupils per 1000 square feet of living area x school floor area per pupil capacity x cost per square foot, less State building aid) generates a proportionate net local capital cost per square foot of living area by residential structure type.

#### 5. Credit Allowance

The remaining step is to consider whether that capital cost assignment should be reduced further by making some allowance for property tax payments on school debt service costs related to the expense of fund pre-existing space needs. Until the proposed bond issue for the new middle school was approved, the only recent debt service cost for school facilities had been for a 2002 construction bond for high school improvements. New debt service costs were incurred for capacity-related improvements to finance the new middle school for grades 5-8, with an amortization schedule extending from 2012 to 2032.

The new school enabled the elimination of five modular classrooms and an increase in the space per pupil capacity available to grade K-8 students, as some of the students were moved from elementary schools into the new middle school.

The additional space and capacity enabled by the construction of the Middle School effectively raised the space standard of the K-8 system from 117 square feet to 144 square feet per pupil capacity, or an upgrade of 27 square feet per pupil overall. The space calculation in Table 4 is used to estimate the proportion of the Middle School development cost attributable to rectifying a pre-existing space deficiency for the 2009 baseline student population.

**Table 4: Estimated Area Required for Upgrade in K-8 Space Per Pupil**

Facility Component	K-8 Facilities Average
Increased K-8 Space (Sq. Ft.) Per Pupil Capacity with new Middle School	27
x Grade K-8 Pupils in 2009 (base year)	1,105
= Sq. Ft. Upgrade of Space Per Pupil in K-8 Facilities	29,835
+ Replace 5 Modular Classrooms @ Approximately 1200 sq. ft. each	6,000
Total Floor Area Upgrade for Pre-Existing K-8 Enrollment	35,835
Area as % of New Middle School floor area (105,578 sq. ft.)	34%

Based on the estimates in Table 2 above, 34% of the cost of the new middle school may be reasonably attributable to an upgrade in the level of service (space per pupil) provided to K-8 students as the net result of middle school construction. To be consistent with the 2009 fee basis, the credit allowance has been retained at the original estimate of 35% of net local costs for the new middle school. The credit allowance calculation for the middle school is shown in Table 5.

**Table 5: Credit Allowance –Middle School****Middle School Debt Service**

Original Bond Amount : \$ 23,650,600

Interest Rate 3% o 4%

State Building Aid % of Principal 44.10%

Calendar Year	Middle School (New Building, 2012) Debt Service & Building Aid				Net School District Cost
	Principal	Interest	Total	Less Est. State Building Aid	
Past Payments					
2012	\$ -	\$ 550,152	\$ 550,152	\$ -	\$ 550,152
2013	\$ 1,180,600	\$ 925,409	\$ 2,106,009	\$ (520,645)	\$ 1,585,364
2014	\$ 1,185,000	\$ 884,000	\$ 2,069,000	\$ (522,585)	\$ 1,546,415
2015	\$ 1,185,000	\$ 836,600	\$ 2,021,600	\$ (522,585)	\$ 1,499,015
Future Payments					
2016	\$ 1,185,000	\$ 789,200	\$ 1,974,200	\$ (522,585)	\$ 1,451,615
2017	\$ 1,185,000	\$ 741,800	\$ 1,926,800	\$ (522,585)	\$ 1,404,215
2018	\$ 1,185,000	\$ 694,400	\$ 1,879,400	\$ (522,585)	\$ 1,356,815
2019	\$ 1,185,000	\$ 641,075	\$ 1,826,075	\$ (522,585)	\$ 1,303,490
2020	\$ 1,185,000	\$ 581,825	\$ 1,766,825	\$ (522,585)	\$ 1,244,240
2021	\$ 1,185,000	\$ 522,575	\$ 1,707,575	\$ (522,585)	\$ 1,184,990
2022	\$ 1,185,000	\$ 475,175	\$ 1,660,175	\$ (522,585)	\$ 1,137,590
2023	\$ 1,185,000	\$ 439,625	\$ 1,624,625	\$ (522,585)	\$ 1,102,040
2024	\$ 1,180,000	\$ 398,250	\$ 1,578,250	\$ (520,380)	\$ 1,057,870
2025	\$ 1,180,000	\$ 351,050	\$ 1,531,050	\$ (520,380)	\$ 1,010,670
2026	\$ 1,180,000	\$ 303,850	\$ 1,483,850	\$ (520,380)	\$ 963,470
2027	\$ 1,180,000	\$ 256,650	\$ 1,436,650	\$ (520,380)	\$ 916,270
2028	\$ 1,180,000	\$ 209,450	\$ 1,389,450	\$ (520,380)	\$ 869,070
2029	\$ 1,180,000	\$ 162,250	\$ 1,342,250	\$ (520,380)	\$ 821,870
2030	\$ 1,180,000	\$ 116,525	\$ 1,296,525	\$ (520,380)	\$ 776,145
2031	\$ 1,180,000	\$ 70,800	\$ 1,250,800	\$ (520,380)	\$ 730,420
2032	\$ 1,180,000	\$ 23,600	\$ 1,203,600	\$ (520,380)	\$ 683,220
Total	\$ 23,650,600	\$ 9,974,261	\$ 33,624,861	\$ (10,429,915)	\$ 23,194,946

Present Worth Past Payments @ 5% \$ 6,018,734  
Portion of Cost Attributed to Existing Space Deficiencies 35%  
Credited Portion of Costs \$ 2,106,557  
City Assessed Valuation 2015 \$ 1,876,001,874  
Past Payment Credit Per \$1000 Raw Land Valuation \$ 1.12

Net Present Value Future Payments @ 5% \$12,572,064  
Portion of Cost Attributed to Existing Space Deficiencies 35%  
Credited Portion of Costs \$4,400,222  
City Assessed Valuation 2015 \$ 1,876,001,874  
Future Payment Credit Per \$1000 Assessed Value of Home \$2.35

IMPACT FEE CREDIT ALLOWANCES PER SQ. FT. OF LIVING AREA FOR INCREASE IN SPACE FOR PRE-EXISTING ENROLLMENT				
Structure Type	Assessed Value Assigned Per Sq. Ft.	Raw Land Value Per Sq. Ft. @ 13% of Total Valuation	Past Pymt Credit	Future Payment Credit
Single Family Det. (SFD)	\$136	\$18	(\$0.02)	(\$0.05)
Units Other Than SFD	\$97	\$13	(\$0.01)	(\$0.03)
Average Housing Unit	\$120	\$16	(\$0.02)	(\$0.04)

## 6. School Impact Fee Assessment Schedule

When it adopted the school impact fee, the Planning Board elected to limit the scope of the school impact fee assessment to the new Middle School facility. Consequently, the impact fee to be assessed reflects only the grade 5-8 portion of total enrollment and related school capital costs. The 2016 impact fee schedule recommended is shown in Table 6 based on the revised calculations.

**Table 6: School Impact Fee per Sq. Ft. of Living Area**

Single Family Detached	\$1.15
All Other Housing Units	\$1.02

The resulting fee for single family detached homes is considerably lower than computed in 2009 to 2010 for two principal reasons: (1) a significant decline in the average number of pupils per 1000 square feet in single family houses in Lebanon; and (2) higher than expected State Building Aid became available to support development of the Middle School.

## 7. Comparison to Estimated Fee Including Other Facilities

For comparison purposes, a school fee was calculated based on: (1) the capacity cost of all K-12 school facilities; (2) capacity costs reflecting K-8 grades only; and (3) cost and capacity of the Middle School (grade 5-8) only. The range of possible impact fees was expressed per dwelling unit and per square foot of living area as shown in the comparison in Table 7.

**Table 7:  
Estimated School Fee Range by Facilities Included**

Type of Structure	Impact Fee Per Sq. Ft. All School Facilities	Impact Fee Per Sq Ft. K-8 Schools Only	Impact Fee Per Sq. Ft. (Middle School Only)
Single Family Detached	\$2.86	\$2.05	<b>\$1.15</b>
All Other Housing Units	\$2.55	\$2.14	<b>\$1.02</b>
All Housing Units (Average)	\$2.75	\$2.10	<b>\$1.10</b>

A school impact fee based on Middle School enrollment ratios and related capital costs represents about 40% to 56% of the full amount that might otherwise be assessed if the scope of the fee were intended to recover capital costs for all school facilities.

On the next page, Table 8 summarizes the components of the school fee calculation. The updated impact fee based on the Middle School is shown in boldface. Other fee amounts based on inclusion of other facilities and grades are shown for comparison only.

The Appendix to Part A of this report (immediately following this section) contains detailed results of the 2015 tabulations of Lebanon resident enrollment data per dwelling unit, enrollment per 1000 square feet of living area, and associated housing characteristics. The method of estimating enrollment ratios for occupied units is also illustrated.

Table 8

CITY OF LEBANON SCHOOL IMPACT FEE COMPUTATION PER SQUARE FOOT BY DWELLING UNIT TYPE - 2016												
Type of Structure	Enrollment Per 1000 Sq. Ft. Living Area				School Floor Area Per Pupil Capacity				School Facility Cost/Sq. Ft. (See Text)			Capital Cost Per Sq. Ft. Residential Living Area
	Grade K-4 Enrollment	Grade 5-8 Enrollment	Grade 9-12 Enrollment	Total K-12 Enrollment	Grade K-4 Schools	Grade 5-8 Middle	Grade 9-12 High School	Total K-12 Per Pupil	Elementary Grade K-4	Middle Grade 5-8	High Grade 9-12	
Single Family Detached	0.0641	0.0514	0.0581	0.1736	117	176	125	137	\$1.29	\$2.17	\$1.44	\$4.90
All Other Housing Units	0.0794	0.0448	0.0305	0.1547	117	176	125	136	\$1.60	\$1.89	\$0.75	\$4.24
All Housing Units (Average)	0.0711	0.0491	0.0470	0.1672	117	176	125	137	\$1.43	\$2.07	\$1.16	\$4.66
Type of Structure	State Building Aid (% of Principal) and Net District Cost (See Text)				Credit Allowances for Property Taxes Paid For Pre-Existing Capacity Needs				Impact Fee Per Sq. Ft. All School Facilities			Impact Fee Per Sq. Ft. K-8 Schools Only
	30%	44%	40%	Net District Cost After State Building Aid	Past Pymts for K-4 Schools	Past Pymts for Middle School	Past Pymts for High School	Future Pymts For K-4 Schools	Future Pymts for Middle School	Future Payments High School		Impact Fee Per Sq. Ft. (Middle School Only)
Single Family Detached	\$0.90	\$1.22	\$0.86	\$2.98	\$0.00	(\$0.02)	(\$0.05)	\$0.00	(\$0.05)	\$0.00	\$2.86	\$2.05
All Other Housing Units	\$1.12	\$1.06	\$0.45	\$2.63	\$0.00	(\$0.01)	(\$0.04)	\$0.00	(\$0.03)	\$0.00	\$2.55	\$2.14
All Housing Units (Average)	\$1.00	\$1.16	\$0.70	\$2.86	\$0.00	(\$0.02)	(\$0.05)	\$0.00	(\$0.04)	\$0.00	\$2.75	\$2.10
												\$1.15
												\$1.02
												\$1.10

## APPENDIX TO PART A:

### AVERAGE ENROLLMENT IN LEBANON HOUSING UNITS 2015

**Table A-1**

#### AVERAGE ENROLLMENT AND HOUSING CHARACTERISTICS BY STRUCTURE TYPE (EXCLUDING AGE RESTRICTED UNITS, NOT ADJUSTED FOR OCCUPANCY) 2015

Structure Type	Housing Characteristics			Enrollment Ratios			
	Avg Home Size	Avg Valuation Per Unit	Valuation Per Sq. Ft.	K-12 Per Unit	K-12 per 1000 Sq. Ft.	Grade 5-8 Per Unit	Grade 5-8 Per 1000 Sq. Ft.
Single Family Detached	1,751	\$238,804	\$136	0.2971	0.1697	0.0880	0.0503
Townhouse	1,376	\$163,648	\$119	0.2254	0.1639	0.0647	0.0471
Two Family Structure	1,138	\$107,987	\$95	0.2255	0.1981	0.0774	0.0680
Multifamily	865	\$79,514	\$92	0.1031	0.1191	0.0272	0.0314
Mobile Home Incl Parks	826	\$35,966	\$44	0.1979	0.2397	0.0625	0.0757
All Housing Units	1,287	\$152,307	\$118	0.2037	0.1583	0.0597	0.0464
Single Family Detached	1,751	\$238,804	\$136	0.2971	0.1697	0.0880	0.0503
All Other Housing Units	954	\$90,237	\$95	0.1367	0.1433	0.0394	0.0413

**Table A-2**

#### AVERAGES FOR SINGLE FAMILY DETACHED HOMES BY YEAR BUILT (EXCLUDING AGE RESTRICTED UNITS, NOT ADJUSTED FOR OCCUPANCY) 2015

SINGLE FAMILY DETACHED HOMES (EXCLUDES AGE-RESTRICTED UNITS AND MULTIPLE HOMES PER PARCEL)							
Year Built	Avg Home Size	Avg Valuation Per Unit	Valuation Per Sq. Ft.	K-12 Per Unit	K-12 per 1000 Sq. Ft.	Grade 5-8 Per Unit	Grade 5-8 Per 1000 Sq. Ft.
Pre 1970	1,560	\$199,678	\$128	0.3074	0.1971	0.0952	0.0611
1970 to 1979	1,908	\$253,865	\$133	0.2363	0.1239	0.0572	0.0300
1980 to 1989	1,927	\$285,151	\$148	0.3208	0.1665	0.1012	0.0525
1990 to 1999	2,116	\$316,977	\$150	0.2864	0.1353	0.1005	0.0475
2000 to 2009	2,190	\$343,583	\$157	0.3204	0.1463	0.0608	0.0277
2010 or Later	2,087	\$302,192	\$145	0.3784	0.1813	0.1351	0.0648
Total Single Family	1,757	\$239,994	\$137	0.2985	0.1699	0.0887	0.0505
1990 or Later	2,146	\$327,213	\$152	0.3094	0.1442	0.0863	0.0402
2000 or Later	2,173	\$336,558	\$155	0.3303	0.1520	0.0734	0.0338
2010 or Later	2,087	\$302,192	\$145	0.3784	0.1813	0.1351	0.0648

**Table A-3 – Resident Enrollment by Structure Type 2015 Detail**

Structure Type	Resident Pupils by Grade							Dwelling Units
	Pre-K	Kindergarten	Elementary	Middle	High	Pre-K to12	K to 12	
Single Family Detached	13	51	237	231	261	793	780	2,625
Townhouse	5	8	40	27	19	99	94	417
Two Family Structure	7	7	33	34	25	106	99	439
Multifamily	7	31	120	71	47	276	269	2,610
Mobile Home Incl Parks	2	2	14	12	7	37	38	192
All Housing Units	34	99	444	375	359	1,311	1,280	6,283
Single Family Detached	13	51	237	231	261	793	780	2,625
All Other Housing Units	21	48	207	144	98	518	500	3,658

**Table A-4 – Resident Enrollment and Single Family Homes - Detail by Year Built**

SINGLE FAMILY DETACHED HOMES (EXCLUDES AGE-RESTRICTED UNITS AND MULTIPLE HOMES PER PARCEL)								
Year Built	Pre-K	Kindergarten	Elementary	Middle	High	Pre-K to12	K to 12	Dwelling Units
Pre 1970	8	29	135	136	139	447	439	1,428
1970 to 1979	1	5	27	23	40	96	95	402
1980 to 1989	4	9	30	35	37	115	111	346
1990 to 1999	0	2	14	20	21	57	57	199
2000 to 2009	0	5	21	11	21	58	58	181
2010 or Later	0	1	7	5	1	14	14	37
Total Single Family	13	51	234	230	259	787	774	2,593
1990 or Later	0	8	42	36	43	129	129	417
2000 or Later	0	6	28	16	22	72	72	218
2010 or Later	0	1	7	5	1	14	14	37

**Table A-5 – Estimated Enrollment Ratios for Occupied Housing Units 2015**

**ESTIMATED LEBANON ENROLLMENT RATIOS ADJUSTED TO OCCUPIED HOUSING UNITS - 2015 ESTIMATES**

Structure Type	Lebanon Resident School Enrollment				Housing Units			
	K-4	5-8	9-12	K-12	Dwelling Units	Occupancy Ratio (2010-2014 ACS Sample Data)	Estimated Occupied Units	Average Living Area Sq. Ft.
Single Family Detached	288	231	261	780	2,625	97.8%	2,567	1,751
Townhouse (Attached)	48	27	19	94	417	100.0%	417	1,376
Two Unit Structure	40	34	25	99	439	93.5%	410	1,138
Three or More Unit Structure	151	71	47	269	2,610	91.6%	2,391	865
Manufactured Housing	16	12	7	35	192	77.9%	150	826
Total Units Excluding Age-Restricted	543	375	359	1,277	6,283	94.5%	5,935	1,287
Total Non-Single Family	255	144	98	497	3,658	92.1%	3,368	954

Structure Type	Estimated 2015 Resident Enrollment Per Occupied Unit				Estimated 2015 Resident Enrollment Per 1000 Sq. Ft. of Living Area			
	K-4	5-8	9-12	K-12	K-4	5-8	9-12	K-12
<b>Single Family Detached</b>	<b>0.112</b>	<b>0.090</b>	<b>0.102</b>	<b>0.304</b>	<b>0.0641</b>	<b>0.0514</b>	<b>0.0581</b>	<b>0.1735</b>
Townhouse (Attached)	0.115	0.065	0.046	0.226	0.0837	0.0471	0.0331	0.1639
Two Unit Structure	0.098	0.083	0.061	0.242	0.0856	0.0728	0.0535	0.2119
Three or More Unit Structure	0.063	0.030	0.020	0.113	0.0730	0.0343	0.0227	0.1301
Manufactured Housing	0.107	0.080	0.047	0.234	0.1295	0.0972	0.0567	0.2834
Average All Occupied Units	0.091	0.063	0.060	0.214	0.0711	0.0491	0.0470	0.1672
<b>Average Non-Single Family Units</b>	<b>0.076</b>	<b>0.043</b>	<b>0.029</b>	<b>0.148</b>	<b>0.0794</b>	<b>0.0448</b>	<b>0.0305</b>	<b>0.1547</b>

## Part B: Public Recreation Impact Fee

This section updates the City's recreation facility impact fee assessment last amended in 2013. At that time, the City modified its recreation impact fee basis to allow assessments to be made to both residential and non-residential development, and to consolidate residential fee categories into two structural categories. The change in methodology was requested in 2013 by the Planning Director and the Planning Board to recognize the following:

1. The fee should continue to reflect realistic levels of capital spending by the City on recreation facilities that further the goals of the 1998 Recreation Master Plan and plans for the Mascoma River Greenway. Both the Planning Board and City Council have in the past expressed reservations over any impact fee that is not grounded in either recapture of actual past investments, or based on likely future improvements indicated by the CIP or an adopted plan for facilities.
2. The Greenway is expected to play a more prominent role in recreation facility development in the City. The Greenway will provide employees with a recreation amenity as well as a link to other recreation areas being improved under the Recreation Master Plan.
3. The principal recreation facility impacts generated by non-residential development are associated with selected facilities of the Greenway that are more readily accessible to employees of commercial developments in Lebanon.

In the recreation impact fee model, the City's estimated capital investment in recreation facilities for the period 2000 to 2030 is averaged across a target future service base with a population of 16,500 and a commensurate scale of commercial and industrial uses.

The recreation impact fees supportable under the assumptions of this model are expressed per square foot of living area (residential uses) and per square foot of gross floor area (commercial and other non-residential uses).

<u>Residential:</u>	Fee Per Sq. Ft. <u>Gross Living Area</u>
Single Family Detached	\$0.65
All Other Residential Units	\$0.93
 <u>Non-Residential</u>	 Fee Per Sq. Ft. <u>Gross Floor Area</u>
Retail, Restaurant, Lodging	\$0.12
Office & Commercial Services	\$0.21
Industrial, Whse, Transportation	\$0.09
Nursing Homes & Licensed Care	\$0.06
Other Institutional Uses	\$0.06

## Impact Fee Model Assumptions

### 1. Recreation Capital Investment 2000-2015

Past capital investments in recreation facilities are shown in Table 9. For facilities already constructed, the cost basis reflects data from the City's fixed asset schedule, with the values updated to 2015 using the Engineering News Record construction cost index. The table also includes the cost of a supportive design study for the Greenway. The 2015 replacement cost of recreation facilities placed in service since 2000 is estimated at about \$3.9 million. This indicates an average annual investment of about \$265,000 per year (in 2015 dollars) from 2000 to 2015.

**Table 9**

LEBANON CAPITAL EXPENDITURES FOR ACTIVE RECREATION FACILITIES SINCE 2000						
Asset Number	Description	Original Expenditure In Year Incurred	Year Completed/ Placed in Service	ENR - Construction Cost Index	Adjustment Factor to Oct 2015 *	Oct 2015 Replacement Cost
<b>MASCOMA GREENWAY</b>						
	MASTER PLAN - MASCOMA GREENWAY	\$50,000	2010	n.a.	1.087	\$54,350
2011 REC	MASCOMA RIVER GRNWX BRIDGE '2012'	\$18,578	2012	9412	1.076	\$19,990
2011 REC.2	MASCOMA RIVER GRNWX TRAILS '2014'	\$104,354	2014	9806	1.033	\$107,798
<b>TOTAL</b>		<b>\$172,932</b>				<b>\$182,138</b>
<b>RIVERSIDE PARK</b>						
116/6.B1	PAVILION	\$10,800	2002	6538	1.549	\$16,729
116/6.I2	SKATE PARK	\$71,346	2002	6538	1.549	\$110,515
116/6.13	PLAYGROUND	\$20,483	2003	6782	1.493	\$30,581
116/6.11	RIVERSIDE PARK LANDSCAPING	\$25,037	2004	7308	1.386	\$34,701
<b>TOTAL</b>		<b>\$127,666</b>				<b>\$192,526</b>
<b>MEMORIAL POOL COMPLEX</b>						
108/23B3	BATHHOUSE	\$390,733	2002	6538	1.549	\$605,245
108/23B4	FILTER BUILDING	\$438,180	2002	6538	1.549	\$678,741
108/23B5	LIFE GUARD HOUSE	\$73,805	2002	6538	1.549	\$114,324
108/23I1	LAP POOL	\$647,036	2002	6538	1.549	\$1,002,259
108/23I2	TRAINING POOL	\$341,116	2002	6538	1.549	\$528,389
<b>TOTAL</b>		<b>\$1,890,870</b>				<b>\$2,928,958</b>
<b>LOWER MEADOWS</b>						
117/15.C1	LOWER MEADOWS FIELDS '2007'	\$35,436	2007	8090	1.252	\$44,366
117/15.C2	LOWER MEADOWS FIELDS '2008'	\$6,891	2008	8550	1.185	\$8,166
117/15.C3	LOWER MEADOWS FIELDS '2009'	\$7,077	2009	8641	1.172	\$8,295
<b>TOTAL</b>		<b>\$49,405</b>				<b>\$60,827</b>
<b>WESTBORO PARK</b>						
REC004C1	WESTBORO PARK '2007'	\$84,383	2007	8090	1.252	\$105,648
REC004C2	WESTBORO PARK '2008'	\$11,193	2008	8550	1.185	\$13,263
REC004C3	WESTBORO PARK '2009'	\$56,256	2009	8641	1.172	\$65,932
<b>TOTAL</b>		<b>\$151,832</b>				<b>\$184,843</b>
<b>ELDRIDGE PARK</b>						
92/30.B1	ELDRIDGE PK R/R & STG FAC	\$120,340	2008	8550	1.185	\$142,603
<b>STORRS HILL</b>						
120/2.I3	STORRS HILL ELECTRICAL UPGRADE	\$201,938	2011	9172	1.104	\$222,940
<b>TOTAL ACTIVE RECREATION FACILITIES</b>		<b>\$2,714,984</b>				<b>\$3,914,835</b>
*For physical improvements, costs are indexed to the Engineering News Record CCI, 2015 cost as of October. Expenditure for Mascoma Greenway plan has been indexed to October 2015 using the CPI.						

## 2. Past Investments and Anticipated Improvements (2000 to Completion)

Table 10 shows both the past investments in recreation facilities (2000-2015) as well as anticipated capital investments based on the most recent available cost estimates for future recreation capital investment by the City.

Note here that the current assumption is that a major investment at Lower Meadows, once thought to be the centerpiece for new athletic fields in Lebanon, is now viewed as unlikely to proceed to development due to environmental constraints (based on conversation with the Recreation Director).

Cost allowances for future investments in Bagley Park, Westboro Park, and other facilities have been included in the chart because they are part of the long-term Recreation Master Plan. However, these projects do not appear in the most recent City CIP schedule. The cost of the Westboro Park was included in the 2010-2015 CIP, but the project has not appeared in subsequent CIPs.

The combined 2015 replacement costs of past and anticipated recreation facility investments from 2000 through the completion of Recreation Master Plan elements totals about \$9.2 million (2015 dollars). The beneficiaries of this investment include existing development as well as new development that occurs between 2015 and the time that the listed projects are fully completed.

If the goal is to complete the selected improvements by 2030, the City would need to invest about \$350,000 per year in recreation facility improvements over the next 15 years. To complete them by 2035 would require about \$263,000 per year in 2015 dollars. The City's expenditures for recreation facility improvements over the past 15 years averaged about \$265,000 per year. For the fee basis to be consistent with the average annual investment in recreation facilities, the listed improvements on which the fee is based (or projects representing a similar level of investment) should be completed by 2035.

## 3. Residential vs. Non-Residential Access to Greenway-related Facilities

Table 11 provides a basis for estimating relative daytime access of residents and non-resident workers employed in Lebanon to the recreation facilities of the Mascoma River Greenway and the parks that it will connect. This allocation is based not on measured usage, but on presumed availability of facilities. For the selected facilities, the availability ratio is estimated at 74% for residents and 26% for non-resident workers employed in the City.

## 4. Capital Cost Allocation Between Residential and Commercial Sectors

In Table 12 the total capital investment for each recreation facility is allocated based on the relative availability of the facility to residents compared with non-resident workers. For the Greenway and the facilities it connects, the cost apportionment is 74% residential and 26% non-residential. For all other facilities, it is assumed to be 100% residential. The adjusted overall capital cost allocation for all included facilities is 85% of total recreation facility cost allocated to residential uses and 15% to the non-residential sector.

Table 10

RECREATION MASTER PLAN COMPONENTS OF IMPACT FEE CAPITAL COST ALLOCATION						Source
<b>Mascoma Corridor</b>						
* Mascoma River Greenway						
Mascoma Greenway Action Plan	---	\$ 54,350	\$ -	\$ 54,350	2010 cost adjusted with CPI	
Construction Costs	---	\$ 182,138	\$ 2,501,830	\$ 2,683,968	2013 cost estimate in 2014-2019 from CIP adjusted for inflation to October 2015	
Total Mascoma Greenway	---	\$ 236,488	\$ 2,501,830	\$ 2,738,318	Total cost for study and improvements	
Fellows Hill Park	\$ 224,600	\$ 381,477	\$ -	\$ 381,477	Rec Plan Cost - CPI Adjustment to 2015	
Packard Hill Covered Bridge	\$ 158,600	\$ 269,378	\$ -	\$ 269,378	Rec Plan Cost - CPI Adjustment to 2015	
* Westboro Park (City park portion of 22-acre rail yard site)	--	\$ 593,060	\$ 184,843	\$ 593,060	2007-2014 fixed asset values (existing investment) adjusted to 2015; Cost estimate for future improvements based on 2010-2015 CIP.	
<b>Central Lebanon</b>						
* Bagley Park	\$ 885,300	\$ 1,503,659	\$ -	\$ 1,503,659	Rec Plan Cost - CPI Adjustment to 2015	
Eldridge Park Improvements (Completed)	--	\$ 142,603	\$ 142,603	\$ -	Fixed asset values adjusted to 2015	
<b>West Lebanon</b>						
* Riverside Park		\$ 192,526	\$ 192,526	\$ -	Fixed asset values adjusted to 2015	
<b>Intensive/Special Use</b>						
Memorial Pool Area Reconstruction (Completed)	--	\$ 2,507,780	\$ 2,928,958	\$ -	Fixed asset values adjusted to 2015	
* Lower Meadows (limited to expenditures to date)	--	\$ 60,827	\$ 60,827	\$ -	Fixed asset values adjusted to 2015; future improvements unlikely (excluded)	
Storrs Hill Electrical Upgrade (Completed)	---	\$ 222,940	\$ 222,940	\$ -	Fixed asset values adjusted to 2015	
Recreation Facilities Investment 2000 to Completion		\$ 3,969,185	\$ 5,249,404	\$ 9,218,589	Total of past and anticipated investment	
* Recreation facility accessible from Mascoma Greenway, assumed to be of benefit to non-residential development						

**Table 11**

**MATRIX TO ESTIMATE AVERAGE DAILY ACCESS TO RECREATION FACILITIES LINKED BY MASCOMA GREENWAY**

(City Residents By Age Group, and Non-Resident Workers Employed in Lebanon)

Population/Employment Component	Pre-School Population (<5)	School Age Population (Age 5-17)	Primary Labor Force: Residents Age 18 to 64		Senior Residents Age 65 or Older		Total Resident Population	Non-Resident Workers Employed in City	Total Allocation Base (Residents and Non- Resident Workers)
			Work in City (70%)	Commute Out (30%)	In Households	In Group Quarters			
Lebanon Resident Population 2010	828	1,684	6,117	2,621	1,901	107	13,151	15,131	28,282
Hours Per Day Per Person Recreation Access Time									
Academic Year (September through May)									
Weekdays	2	2	3	2	8	0		2	
Weekends	8	8	8	8	8	0		0	
Summer Season (June through August)									
Weekdays	2	8	3	2	8	0		2	
Weekends	8	8	8	8	8	0		0	
Annual Person-Hours Facility Access (Millions)	1.12	2.95	9.88	3.55	5.55	0.00	21.93	7.90	29.82
Hours Per Person Per Year	1,354	1,750	1,615	1,354	2,920	0	1,667	522	
Avg Access - Hrs/Person/Day	3.7	4.8	4.4	3.7	8.0	0.0	4.6	2.0	
							per day	per workday	
<b>CALENDAR DAYS BY PERIOD:</b>									
Workdays Sept through May	195								
Weekend Days Sept through May	78								
Workdays June through August	66								
Weekend Days June through August	26								
Total Calendar Days	365								
<b>General Assumptions:</b>									
Workers in City have limited hours of access due to work and commuting hours									
Non-resident workers primary access periods before work, lunch break, after work									
Pre-school population - practical access limited by parental schedule									
School age population - has more access during summer months than academic year									
							Resident Access	Non-Resident Worker Access	Total
							74%	26%	100%

**Table 12**

<b>RECREATION MASTER PLAN COMPONENTS OF IMPACT FEE CAPITAL COST ALLOCATION</b>	<b>Total Recreation Investment 2015 Dollars</b>	<b>Cost Allocation Residential %</b>	<b>Cost Allocation Non- Residential %</b>	<b>Capital Cost Residential</b>	<b>Capital Cost Non- Residential</b>
<b>Mascoma Corridor</b>					
* Mascoma River Greenway					
Mascoma Greenway Action Plan	\$ 54,350				
Construction Costs	\$ 2,683,968				
Total Mascoma Greenway	\$ 2,738,318	74%	26%	\$2,026,355	\$711,963
Fellows Hill Park	\$ 381,477	100%	0%	\$381,477	\$0
Packard Hill Covered Bridge	\$ 269,378	100%	0%	\$269,378	\$0
* Westboro Park <i>(City park portion of 22-acre rail yard site)</i>	\$ 777,903	74%	26%	\$575,648	\$202,255
<b>Central Lebanon</b>					
* Bagley Park	\$ 1,503,659	74%	26%	\$1,112,708	\$390,951
Eldridge Park Improvements (Completed)	\$ 142,603	100%	0%	\$142,603	\$0
<b>West Lebanon</b>					
* Riverside Park	\$ 192,526	74%	26%	\$142,469	\$50,057
<b>Intensive/Special Use</b>					
Memorial Pool Area Reconstruction (Completed)	\$ 2,928,958	100%	0%	\$2,928,958	\$0
* Lower Meadows (limited to expenditures to date)	\$ 60,827	74%	26%	\$45,012	\$15,815
Storrs Hill Electrical Upgrade (Completed)	\$ 222,940	100%	0%	\$222,940	\$0
<b>Recreation Facilities Investment 2000 to Completion</b>	<b>\$ 9,218,589</b>	<b>85%</b>	<b>15%</b>	<b>\$ 7,847,548</b>	<b>\$1,371,041</b>
<i>* Recreation facility accessible from Mascoma Greenway, assumed to be of benefit to non-residential development</i>					

### 5. Service Base Assumptions

In Table 13, growth assumptions for the City have been updated from the last impact fee report to project horizon year development in residential and non-residential sectors. Originally the Recreation Master Plan assumed a total population horizon of about 16,500 for facility planning purposes. With this as a target population for the residential service base for the associated Recreation Master Plan improvements, BCM Planning has estimated the associated number of households, housing units, employment, and non-residential building area that would be consistent with that population as indicated by historical relationships within the data for 2000, 2010 and 2014.

**Table 13**

HISTORIC CHANGE AND FUTURE GROWTH ASSUMPTIONS FOR FEE ALLOCATION				
Development Sector	2000	2010	2014 Est.	Rec Plan Horizon Population
<b>RESIDENTIAL BASE</b>				
Total Population	12,568	13,151	13,557	16,500
Persons in Group Quarters	290	144	148	181
Persons in Households	12,278	13,007	13,409	16,319
Total Households	5,500	6,186	6,541	8,160
Average Household Size	2.23	2.10	2.05	2.00
Total Housing Units	5,707	6,649	7,034	8,775
<b>NON-RESIDENTIAL BASE</b>				
Total Covered & Government Jobs in City *	16,880	18,929	18,237	22,196
Private Sector Jobs in City *	15,996	18,014	17,429	21,213
Total Jobs Per Capita	1.34	1.44	1.35	1.35
Private Sector Jobs Per Capita	1.27	1.37	1.29	1.29
				(2014 Avgs)
<b>Gross Floor Area of Non-Residential Uses</b>				
Total Including Government	11,450,000	12,600,000	13,200,000	15,300,408
Private Only	10,814,000	11,949,000	12,468,000	14,523,524
Square Feet Per Employee All Non-Res Devel	678	666	724	689
Square Feet Per Employee (Private Only)	676	663	715	685
				(Avg of 2000, 2010, and 2014 floor area ratios)
* NH Employment Security data for 1990-2014 (covered employment)				

The horizon year assumptions assume that the ratio of employees to population in the City remains consistent with the 2014 ratio. Gross floor area per employee is assumed to reflect the average ratios indicated for the 2000, 2010, and 2014 sample years. Based on those relationships (see Table 13) a future residential population of 16,500 would be consistent with an inventory of about 15.3 million square feet of gross floor area in non-residential uses, and about 14.5 million square feet in private sector commercial uses.

## 6. Impact Fee Assessment

The total recreation facility investment (past and projected) for the period 2000 through completion of listed projects is estimated at about \$9.2 million. This total is apportioned 85% to residential demand and 15% to non-residential uses. The capital cost allocation for residential demand is then allocated across the total household population for the horizon year and the non-residential investment is allocated across a horizon year estimate of 15.3 million square feet total gross floor area.

The resulting capital investment attributable to the horizon year (completion of listed projects) averages \$481 per capita in recreation plan capital improvements. That per capita investment is then assigned by average household size by type of dwelling, and converted to a rate per square foot based on the average living area of dwelling units in Lebanon.

For the non-residential sector, the cost allocation is assigned to a service base projected to be 15.3 million square feet of non-residential gross floor area, resulting in an average capital cost allocation of \$0.09 per square foot. Based on averages for the City for 2000, 2010 and 2014, the floor area of non-residential buildings averaged 689 square feet per employee. The non-residential impact fee is equivalent to about \$62 per employee.

**Table 14 – Recreation Impact Fee Residential and Non-Residential Uses****IMPACT FEE BASED ON SELECTED RECREATION MASTER PLAN INVESTMENTS 2000 TO COMPLETION  
SERVING PROJECTED SERVICE BASE WITH TOTAL POPULATION OF 16,500**

<b>RESIDENTIAL COST ALLOCATION</b>	Residential \$ 7,847,548
Total Population Plan Horizon Year	16,500
Household Population Plan Horizon Year	16,319
Recreation Plan Capital Investment Per Capita	\$481

Residential Structure Type	Est. Average Household Size 2010 *	Avg Fee Per Unit	Avg Sq. Ft. Existing Homes 2015	Recreation Impact Fee Per Sq. Ft.
Single Family Detached	2.39	\$1,150	1,757	\$0.65
All Other Housing	1.85	\$890	957	\$0.93

**NON-RESIDENTIAL COST ALLOCATION**

Recreation Facility Investments - Non-Res Share	\$1,371,041
Sq. Ft. Non-Residential Private - Plan Horizon Year	15,300,408
Average Cost Per Sq. Ft.	\$0.09
Average Square Feet Per Employee	689
Average Cost Per Employee	\$62

Non-Residential & Institutional Uses	Average Sq. Ft. Per Employee	Impact Fee Per Square Foot
Retail, Restaurants and Lodging	500	\$0.12
Offices and Commercial Services	300	\$0.21
Industrial, Transportation, Whse, Communic.	700	\$0.09
Nursing Homes & Licensed Care Facilities	1,000	\$0.06
Other Institutional Uses	1,000	\$0.06
Average Non-Residential (All Other Uses)	689	\$0.09

Because various commercial sectors tend to have different ratios of employees to floor area, the impact fee is adjusted so that those sectors with more employees per square foot pay higher fees than those with fewer employees per square foot. For example, a retail use would pay about \$.12 per square foot while an office complex would pay \$0.21 per square foot. Uses that typically have fewer employees for a given amount of floor area (industrial, warehousing for example) would pay a lower rate of about \$0.09 per square foot.

## Part C: Police Department Impact Fee

The Lebanon Police Department headquarters located on Poverty Lane is a facility of about 13,800 square feet constructed in 1991. At the time impact fees were first researched by BCM Planning in Lebanon in 2006, an interview with the Chief of Police indicated that the facility was constructed with the intent of supporting staffing of up to 40 sworn personnel. At the time the building was designed, an International Association of Chiefs of Police (IACP) guideline of about 350 square feet per officer was used to size the facility. Reserve capacity at the facility remains available to accommodate additional sworn personnel if required to meet the demands of new development.

The City has significant service demands from non-residential development that influence its staffing needs in comparison with other communities of a similar size, including:

- Location at the confluence of north-south and east-west interstate highways;
- A regional work destination with a high ratio of in-bound commuter traffic;
- A border community to Vermont that is a regional shopping destination with no sales tax;
- A growing retail and commercial development sector and the locus of a unique and large scale medical facility (Dartmouth-Hitchcock and related facilities).

Because of these and other influences, the ratio of officers to resident population in Lebanon is comparatively high. While it is clear that population alone is insufficient to define the personnel needs of any jurisdiction, a relative service standard is required to assign proportionate impacts and related capital costs. The Lebanon Police Department has 2.4 uniformed personnel per 1000 residents. The target personnel ratio established in the original impact fee assessment was only slightly higher at 2.5 officers per 1,000 population. This ratio should in no way be construed as a limitation on the personnel the police department may find necessary to provide adequate services now or in the future.

Based on a target ratio of 2.5 uniformed officers per 1,000 persons, and total floor area within the buildings of the department, the police station facilities are estimated to have the capacity to support a resident population of up to 16,000. The most recent population estimate available for Lebanon at the time this study was prepared was 13,557 persons (2014 estimate).

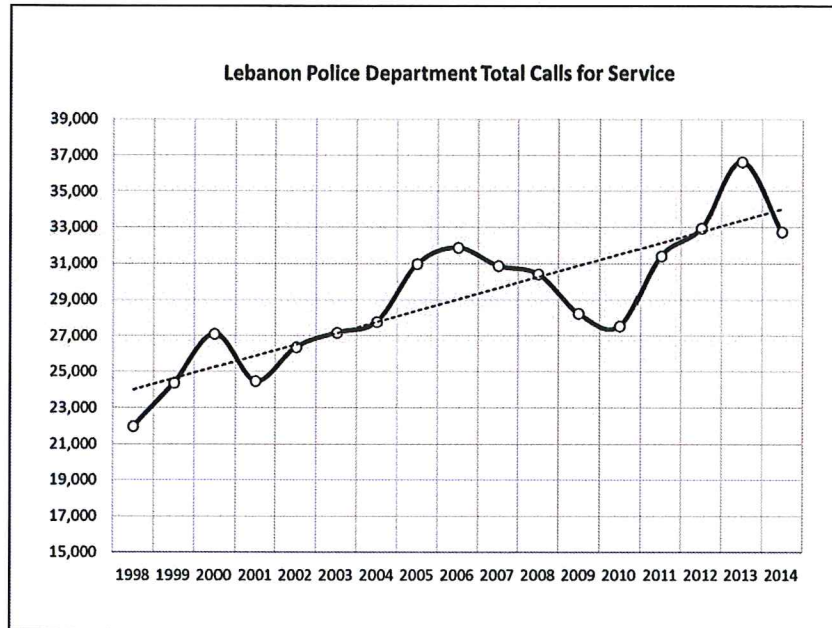
Because the target service population is higher than the current population, an impact fee may be used to recoup part of the City's past investment in facility capacity through impact fees. Based on the original planning estimates for the facility relative to staffing ratios, the current facility is capable of supporting a larger complement of uniformed personnel sufficient to serve new development.

### 1. Proportionate Demand by Sector

Because police services provide protection and response for all classes of property, proportionate measures are needed to allocate related capital costs between residential and non-residential demand. Measures of the proportionate demand to protect both persons and property include calls for service, assessed valuation, square footage of buildings, and the relationship between local employment and the City's resident population.

The Lebanon Police Department does not compile call data that is address-specific or property-class based. Therefore, a direct measurement of demand allocation between residential and non-residential sectors is not possible. Figure 1 tracks the change in total calls for service logged by the Lebanon Police Department from 1998 to 2014. During this period, call volume increased by 10,786 or by about 49%.

**Figure 1:**



**Table 15**

NUMBER OF CALLS BY SECTOR - LEBANON POLICE DEPARTMENT - 1998 TO 2014				Change 1998-2014		Share of Total Calls	
Reporting Sector	Predominant Land Use	1998	2014	Number	Percent	1998	2014
Sector 1 - N. of Mascoma River	Residential	6,595	11,245	4,650	71%	30.0%	34.3%
Sector 2 - S. of Mascoma River	Mixed - Residential + Downtown S. of Mascoma River	4,908	5,252	344	7%	22.3%	16.0%
Sector 3 - (W. Lebanon to E. Wilder)	Rte 10 N - Mostly Residential & Northern Part of West Leb.	4,107	6,265	2,158	53%	18.7%	19.1%
Sector 4 - (Includes Rte 12-A, S. of Route 4; Airport)	Commercial & Airport	4,325	6,752	2,427	56%	19.7%	20.6%
Sector 6 - Rte 120 N of Etna Rd	Commercial	574	1,751	1,177	205%	2.6%	5.3%
Sector 7 - LaHaye/Medical Center Dr	Commercial	294	626	332	113%	1.3%	1.9%
Sector 5 (at Police HQ)	Mixed - no geographic reference	1,114	738	-376	-34%	5.1%	2.3%
All Other		46	120	74	161%	0.2%	0.4%
<b>Total</b>		<b>21,963</b>	<b>32,749</b>	<b>10,786</b>	<b>49%</b>	<b>100.0%</b>	<b>100.0%</b>

Table 15 shows the call volume data within the City by sector. Not all calls have a geographic reference, and associations of call volume with residential vs. commercial demand are speculative at best. There are three sectors identified in the original impact fee assessment that are viewed as

predominantly commercial areas (Sectors 4, 6 and 7). In 1998 these sectors represented 25% of the call volume associated with geography; the ratio was 29% in 2014. About 31% of the increase in call volume reported geographically was in the predominantly commercial sectors. Other sectors also contain commercial property, and each sector contains a mix of residential and commercial development. For purposes of estimating the proportionate call volume factor, we have used a ratio of 1/3 non-residential (33%) and 2/3 residential (67%).

Because Police Department services provide not only emergency response, but also crime prevention, and regular patrols that serve all types of development in the mission to protect persons and property, other factors may also be appropriate to estimate the residential vs. non-residential share of demand on the Lebanon Police Department. These include assessed valuation, employment and population, and building floor area. (See Table 14 below.) The average non-residential share of service demand is estimated at 52% and the residential share at 48%.

**Table 16: Estimated Share of Service Demand – Police Department**

Sector	Share of Assessed Valuation (1)	Estimated Share of Calls 1998-2014	Daytime Pop (Employment - Population)	Share of Floor Area (1)	Average (Rounded)
Non-Residential	63%	33%	57%	53%	<b>52%</b>
Residential	37%	67%	43%	47%	<b>48%</b>
<i>(1) Excludes vacant land, utilities. Includes government uses and buildings and their assigned valuation. Floor area measured by living area for residential, gross area for non-residential</i>					

## 2. Allocation of Costs to New Development

As of 2015 the City has about 974 square feet of non-residential gross floor area per resident. For the purpose of the impact fee calculation, it is assumed that the same ratio of non-residential floor area per capita will apply at the time the facility reaches its estimated personnel-based capacity (residential population of about 16,000). Table 17 summarizes the assumptions of the updated impact fee model and its assignment of police department facility costs to new development.

## 3. Impact Fee Assessment Per Square Foot

The Police Department impact fee is based on the recoupment of the City's investment in the department headquarters and related communications equipment and facilities at the site. These costs include the value of land at the site, the original cost of building construction adjusted to 2015 using R.S. Means time adjustments for construction cost in New Hampshire, and the original cost of communications equipment in the building adjusted to 2015 adjusted based on the Consumer Price Index for October 2015.

The average capital cost computed in Table 17 is \$167 per capita for residential uses and \$0.19 per square foot for non-residential uses. The residential fees are computed by multiplying \$167 per capita times average household size, divided by average living area per housing unit, to yield an impact fee per square foot.

**Table 17: Impact Fee Basis for Police Department Facilities**

<b>POLICE DEPARTMENT IMPACT FEE - LEBANON, NH</b>		
<b>Demand Base for Services</b>	<b>Total Population</b>	<b>Non-Residential Property GFA</b>
Base Year (2014 NHOEP Estimate)	13,557	13,200,000
Capacity of Police Department Building (Population)	16,000	15,578,668
Supportable New Development	2,443	2,378,668
<b>Number of Sworn Officers in Department</b>		<b>Officers Per 1000 Persons</b>
Base Year (2014) Sworn Officers - Actual	32.0	2.4
2014 Sworn Officers Needed at Standard	33.9	2.5
Planning Basis for Building Capacity	40	2.5
Support for New Development (additional officers)	6.1	@ Planning Std
<b>Building Floor Area and Replacement Cost</b>	<b>Police Dept</b>	
Floor Area Of Police Headquarters & Storage	14,150	
Planning Std Used - GFA Per Officer	350	
2014 Space Demand at Officers/1000 Standard	11,862	
Space Available to Support New Development	2,288	Adjusted 2015 Cost
Station Development Cost in Base Year (1993)	\$1,764,234	\$3,765,654
Evidence Garage (1998)	\$43,328	\$79,848
2015 Equivalent Development Cost		\$3,845,502
Estimated Current Cost to Construct Per Sq. Ft.		\$272
Land Value of Site (10 Acres) - 2015 Assessed Val.		\$830,200
Subtotal Land & Buildings Investment		\$4,675,702
Communications Systems Improvements		\$898,000
<b>Total Land, Building and Communications</b>		<b>\$5,573,702</b>
<b>Allocation of Facility Cost By Sector</b>		
Non-Residential Share @ Station Planned Capacity	52%	\$2,898,325
Residential Share @ Station Planned Capacity	48%	\$2,675,377
<b>Average Unit Costs for Capital Facilities</b>		
Average Non-Residential Development Per Sq. Ft.		<b>\$0.19</b>
Average Residential Cost Per Capita		<b>\$167</b>
<b>Residential Impact Fee Per Dwelling Unit</b>	<b>Average Household Size Estimated 2010</b>	<b>Impact Fee Per Dwelling Unit</b>
Single Family Detached (SFD)	2.39	<b>\$399</b>
Units Other Than Single Family Detached	1.85	<b>\$309</b>
<b>Non-Residential Fee Per Square Foot</b>	<b>Multiplier</b>	<b>Fee Per Sq. Ft.</b>
Retail, Restaurants, Lodging	1.40	<b>\$0.27</b>
Offices and Commercial Services	0.70	<b>\$0.13</b>
Industrial, Transportation, Whse, Communic.	0.35	<b>\$0.07</b>
Nursing Homes & Licensed Care Facilities	0.20	<b>\$0.04</b>
Other Institutional Uses	1.40	<b>\$0.27</b>
Average Non-Residential	1.00	<b>\$0.19</b>

Table 18 on the next page shows the impact fee schedule per square foot for residential and commercial uses. For residential uses, the fee reflects the average residential cost per capita times the estimated number of persons per household by structure type, divided by the average living area of the residential unit.

The average cost per square foot of non-residential floor area is adjusted from an average for all non-residential uses by multipliers that reflect relative expected demand from various commercial sub-sectors. These multipliers are based on a 2008 study by BCM Planning, LLC for the city of Dover, New Hampshire.

In that study, the rate of police department calls for service per square foot of floor area was compared by sub-category of non-residential development. Retail and institutional uses generate significantly higher call volumes than the average. Office uses were somewhat lower, followed by industrial use and licensed care facilities (nursing homes and assisted living with personal care). At the time of the Lebanon impact fee update, it was not possible to associate Lebanon Police Department calls for service with particular land uses to document local call rates per square foot by category.

Using the multipliers for the non-residential sub-group results in impact fee assessments that vary by use category, with retail uses assessed at \$0.27 per square foot, offices at \$0.13 per square foot, and industrial uses at \$0.07 per square foot.

**Table 18: Police Department Impact Fee Schedule**

<b>Police Department Impact Fee</b>	<b>Estimated Average Household Size Using 2010 Census</b>	<b>Capital Cost Per Dwelling Unit</b>	<b>Average Living Area 2015</b>	<b>Impact Fee Per Square Foot</b>
Single Family Detached	2.39	\$399	1,757	<b>\$0.23</b>
All Other Housing	1.85	\$309	957	<b>\$0.32</b>
<b>Non-Residential &amp; Institutional Uses</b>	<b>Multiplier x Average Non-Residential</b>	<b>Impact Fee Per Square Foot</b>		
Retail and Restaurants	1.40	<b>\$0.27</b>		
Offices and Commercial Services	0.70	<b>\$0.13</b>		
Industrial, Transportation, Whse, Communic.	0.35	<b>\$0.07</b>		
Nursing Homes & Licensed Care Facilities	0.20	<b>\$0.04</b>		
Other Institutional Uses	1.40	<b>\$0.27</b>		
Average Non-Residential (Base)	1.00	<b>\$0.19</b>		

The resulting impact fees are assessed per square foot of building area. For the purpose of residential assessment, gross living area is used to compute the fee; for non-residential uses the fee is applied to gross floor area of buildings.

Since there is no remaining debt service on the existing Police Department facility, impact fees may be used to offset other department capital projects that have a tangible relationship to enhancing the department's building capacity, internal systems, or response capability.

## Part D: Fire Department Impact Fee

This report introduces a new impact fee category for the Fire Department as an addition to the existing fee schedules. Most fire department impact fees are based on the total cost of capital facilities including fire station building space and major capital equipment and apparatus. In Lebanon, there are three fire stations that, according to past and recent editions of the Master Plan, have significant needs for renovation and improvement. A long term strategy for defining fire station locations has not yet been developed, and it is possible that fire station space could be consolidated in the future. Major improvements to the Central Fire Station, as recommended in past Capital Improvement Programs, have not been funded. Because of these uncertainties, an impact fee assessment that includes fire station building space may be premature.

Although improvement and expansion plans for fire stations remain unresolved, the City has a major capital investment in the principal vehicles and apparatus of the department, with an estimated current replacement cost of \$6.79 million. In addition to the original investment made to provide the current inventory of equipment, the various pieces of apparatus must be replaced periodically as they approach the end of their useful service life.

The original acquisition of this capital equipment has been entirely borne by existing development. However, this inventory of firefighting, rescue and ambulance equipment (and its periodic replacement) must also provide capacity to respond to demands from new development as well. The basis of assessment described in this section will recoup from new development a proportionate share of the City's capital investment in major fire department vehicles and apparatus.

### 1. Proportionate Demand Measures

The scope of Fire Department services includes fire prevention, safety inspections, emergency preparedness, and responses to fire and rescue incidents throughout the City. These services provide coverage for all classes of property, regardless of the actual frequency of responses to incidents. A number of proportionate measures are used in the fee basis to allocate capital costs to residential and non-residential land uses.

a. Lebanon Fire Department Response Data (NFIRS). The Lebanon Fire Department reports its response data to the National Fire Incident Reporting Service (NFIRS). Each response entry is associated with a property use code and description. Counts of the number of responses by property use code provide a direct proportionate measure of actual runs made by the Fire Department. The response data can then be organized into more general use categories for a proportionate demand analysis.

The NFIRS data provided by the Lebanon Fire Department for this review spans the five calendar years of 2011-2015, comprising 13,322 responses during the period (an average of 2,664 responses per year). About 93% of these responses were associated with some type of developed property, while 7% were recorded as relating to outdoor locations or to an incident on a street or highway that could not be associated with a particular property type. (See data in Table 19.)

The remaining responses that could be associated with a property use class totaled 12,332. Of these, BCM Planning estimates that about 48% are associated with a residential use and the remaining 52% with non-residential uses (including both publicly and privately owned properties).

**Table 19**

<b>LEBANON FIRE DEPARTMENT RESPONSE BREAKDOWN BY PROPERTY USE 2011-2015</b>			
<b>Property Use Categories *</b>	<b>Fire Department Responses Calendar Years 2011 to 2015</b>	<b>% of Responses Within Group</b>	<b>% of All Responses Recorded</b>
<b>RESIDENTIAL</b>	<b>5,923</b>	<b>100.0%</b>	<b>44.5%</b>
One and Two Family	2,573	43.4%	19.3%
Multifamily	3,064	51.7%	23.0%
Residential Street, Driveway, Other Res.	286	4.8%	2.1%
<b>NON-RESIDENTIAL</b>	<b>6,409</b>	<b>100.0%</b>	<b>48.1%</b>
Retail, Restaurant, Lodging, Entertain.	1,787	27.9%	13.4%
Offices Including Financial, Medical	904	14.1%	6.8%
Commercial Other Services	164	2.6%	1.2%
Industrial, Storage, Distribution, Transport	481	7.5%	3.6%
Street or Road in Commercial Area	212	3.3%	1.6%
Hospitals and Mental Health Facilities	859	13.4%	6.4%
Nursing Homes, Boarding and Care	1,377	21.5%	10.3%
Public Uses and Other Institutional	625	9.8%	4.7%
<b>OTHER NOT ASSIGNABLE BY USE</b>	<b>990</b>	<b>100.0%</b>	<b>7.4%</b>
Street or Highway - No Use Assigned	667	67.4%	5.0%
Outdoor Location - No Use Assigned	239	24.1%	1.8%
Other Unknown or No Category Reported	84	8.5%	0.6%
<b>TOTAL</b>	<b>13,322</b>		<b>100.0%</b>
<b>TOTAL FOR CALLS ASSIGNED BY LAND USE</b>	<b>12,332</b>	<b>100.0%</b>	<b>92.6%</b>
Residential	5,923	48.0%	44.5%
Non-Residential	6,409	52.0%	48.1%

*\* Source of call data is Lebanon Fire Department records entered in National Fire Incident Reporting Service file. Use groupings by BCM Planning, LLC based on property use codes and descriptions within the NFIRS data.*

***b. Estimated Response Rates Per Square Foot of Building Area.*** Taking this data a step further, BCM Planning, LLC compared the NFIRS response data for general property classes with building floor area for similar use categories using property tax assessment data. Annual response ratios were then estimated per 1,000 square feet of building floor area. This provides an estimate of the relative frequency of Fire Department responses for the land use categories. (See Tables 20-21.)

**Table 20**

<b>FIRE DEPARTMENT RESPONSES PER HOUSING UNIT AND PER 1000 SQ. FT.</b>				
<b>Residential Sector</b>	<b>Housing Units</b>	<b>2011-2015 Fire Dept Responses</b>	<b>Responses Per Unit Per Year</b>	<b>Responses Per Year Per 1000 Sq. Ft. Living Area</b>
One and Two Family	3,256	2,573	0.158	0.098
All Other Housing Units	3,445	3,064	0.178	0.190
Total Identified Residential Units	6,701	5,637	0.168	0.133

*Source: BCM Planning, LLC estimates based on comparison of Fire Department NFIRS response data by housing type to residential tax assessment information.*

For residential uses, the average housing unit generated about 0.168 responses per year per unit, or about 0.133 calls per 1000 square feet of living area. The ratio per unit and per 1000 square feet was higher for multifamily property (at 0.178 per unit, 0.193 per 1000 square feet) than for single family and two family units (0.158 per unit, 0.098 per 1000 square feet). Expected demand based on call data is therefore higher per unit or per square foot for multifamily housing than for single family homes.

For non-residential uses, response rates were estimated based on gross floor area within the land use categories. The average response rate for all non-residential uses was 0.090 calls per 1,000 square feet of gross floor area per year. Higher response rates were indicated for nursing and licensed care facilities, retail and related uses, and institutional uses including government. Response rates for offices and general commercial services were lower than the average for all non-residential uses. The relative response rate for Industrial and storage uses was less than half the average for all non-residential property classes. (See Table 21.)

**Table 21**

FIRE DEPARTMENT RESPONSES PER 1000 SQ. FT. GROSS AREA (NON-RESIDENTIAL)				
Non-Residential Sector Uses	2011-2015 LFD Responses	Avg Responses Per Year	Per Year Per 1,000 SF Gross	Response Frequency Relative to Average
Retail, Restaurant, Lodging	1,787	357	0.110	<b>1.22</b>
Office & Commercial Services	1,068	214	0.070	<b>0.78</b>
Industrial, Whse, Trans, Communic.	481	96	0.040	<b>0.44</b>
Nursing, Hospital & Licensed Care	2,236	447	0.140	<b>1.56</b>
Govt & Other Institutional	625	125	0.110	<b>1.22</b>
Total Identified Non-Residential Uses	6,197	1,239	0.090	<b>1.00 (Avg)</b>

The relative response rates are used later in the basis of assessment as a means to assign impact fees per square foot that vary according to relative response rates.

*c. Other Proportionate Measures and Average of Factors.* As with the Police Department impact fee, appropriate proportionate measures of the demand on related services should include factors other than actual response data, because all properties benefit from public safety coverage even if they do not generate significant call volume. These other indirect measures include total assessed valuation of property, the square footage of buildings, and the relationship between local employment and the City's resident population. (See Table 22.)

**Table 22**

PROPORTIONATE DEMAND FACTORS FOR FIRE DEPARTMENT					
Development Sector	Share of Assessed Valuation 2015 (1)	Share of Fire Department Calls From 2011 to 2015	Daytime Pop (Employment Plus Population) 2014	Share of Building Floor Area 2015 (2)	Average of Factors (Rounded)
Non-Residential Including Government	63%	52%	57%	53%	<b>56%</b>
Residential Uses - All Housing Types	37%	48%	43%	47%	<b>44%</b>
(1) Excludes vacant land, utilities. Includes government uses and buildings and their assigned valuation even if tax exempt.					
(2) Floor area measured by living area for residential units and gross floor area for non-residential development.					

When these other factors are averaged with the response data, the average proportionate demand ratio for Fire Department services is 56% non-residential and 44% residential. These proportions are used in the impact fee model to allocate Fire Department capital costs between the two major use categories.

## 2. Capital Facility Costs Allocated: Major Capital Equipment

The Lebanon Fire Department has estimated that the total replacement cost of its major fire apparatus and ambulances is about \$6.79 million. (See Table 23.) Between 2016 and 2040, it is likely that all of this equipment will need replacement based on the remaining useful life of the vehicles and apparatus in the Lebanon Fire Department inventory.

**Table 23**

LEBANON FIRE DEPARTMENT - MAJOR CAPITAL EQUIPMENT - ESTIMATED REPLACEMENT COST					
Model Year	Fire Department Capital Equipment Description	Age	Years In Service	Replacement Year	Replacement Cost
2007	Car 3 - 2007 Ford Expedition	9	10	2016	\$50,000
2008	Ambulance 1 - Ford E-450 Ambulance	8	11	2016	\$250,000
1995	Engine 4 - Smeal Simon/Duplex	21	20	2017	\$620,000
2008	Car 4 - 2008 Ford Escape	8	10	2017	\$50,000
---	New Forestry Unit	---	20	2018	\$100,000
1991	Rescue - Emergency One Heavy Rescue	25	25	2018	\$500,000
2008	Car 2 - 2008 Ford Taurus	8	10	2018	\$50,000
2000	Engine 1 - American LaFrance 3-D Pumper.	16	20	2020	\$757,000
2012	Ambulance 2- Ford F-450 Ambulance	4	8	2020	\$265,000
1991	Ladder 1 - Emergency One Hurricane 110' Aerial Ladder	25	30	2021	\$1,500,000
2011	Utility 1 - Ford F-350 Pick-up	5	12	2023	\$55,000
2015	Ambulance 3 - Ford E-450 Road Rescue	1	8	2023	\$275,000
2015	Car 1 - 2015 Ford Explorer	1	10	2025	\$60,000
2006	Engine 2 - E-One Contender Pumper	10	20	2026	\$900,000
2014	Truck 2 - E-One Quint	2	20	2034	\$1,250,000
2015	Utility 2 - Ford F550 Bucket Truck	1	25	2040	\$110,000
<b>Major Capital Equipment Replacement Cost</b>					<b>\$6,792,000</b>

## 3. Allocation of Costs Per Unit of Development

The existing inventory of equipment (and its periodic replacement to assure functionality) provides the Lebanon Fire Department with capacity that will serve both existing and new development. At some point in the future, if additional equipment is added to the inventory, its replacement cost may be added to the cost basis of the fee.

The total capital investment of \$6.792 million in capital equipment is assigned to a demand base projected to 2040. Proportionate shares of the total investment are allocated to two major development sectors based on existing conditions, defined earlier in this analysis at 56% to non-residential uses and 44% to residential uses.

Non-residential sector costs are then apportioned across the projected 2040 gross floor area of uses in that sector, and residential costs are estimated per capita based on a future service population. The

future service population assumes a constant relationship between the City population and the amount of non-residential gross floor area at 974 square feet per capita.

The cost allocation assumptions are summarized by the following steps. (See Table 24):

- Replacement cost of major vehicles and apparatus to be allocated: \$6.792 million
- Projection of service base to 2040 centers on projected non-residential growth, assuming:
  - Non-residential: 104,000 sq. ft. added per year (2005-2015 average) x 24 years
  - Residential: Population @ current ratio of 974 sq. ft. non-residential area per capita
- Proportionate demand on capital facilities:
  - Non-residential: 56%
  - Residential: 44%
- Average capital cost to service projected 2040 service base:
  - Non-residential: \$ 0.24 per square foot (gross floor area)
  - Residential: \$ 185 per capita (\$389 per dwelling unit @ avg. household size)  
\$ 0.30 per square foot (living area) for an average dwelling unit
- Adjust fees per square foot for sub-subcategories:

Apply relative response rates within the non-residential and residential sectors

The average capital cost to serve the projected non-residential service base of 2040 is estimated at \$0.24 per square foot of gross floor area. A relative response multiplier is then applied to the non-residential sub-groups to compute an impact fee based on relative response rates per thousand square feet.

The average cost to serve residential uses is estimated at \$185 per capita, or about \$389 per housing unit based on an estimated average household size (2014) of 2.10 persons. Average housing unit size in Lebanon is estimated at 1,290 square feet (living area) based on BCM Planning, LLC analysis of property assessment data. At the average housing unit size, the capital cost per square foot of living area averages about \$0.30 per square foot for residential uses.

The review of response rates per unit and estimates of responses per 1,000 square feet of living area within the residential sector indicates that multifamily units are likely to generate higher response rates per square foot than single family homes. The relative response rates for the two residential structure types are then used to assign a lower fee per square foot for single family homes and a higher fee per square foot for attached and multifamily units.

**Table 24**

<b>FIRE DEPARTMENT IMPACT FEE - LEBANON, NH (MAJOR CAPITAL EQUIPMENT ONLY)</b>			
<b>Demand Base for Services</b>	<b>Total Population</b>	<b>Non-Residential Property GFA</b>	
Base Year (2014 NHOEP Estimate)	13,557	13,200,000	
Future Service Base (2040 Estimated)	16,115	15,696,000	
<b>Replacement Cost of Major Vehicles and Apparatus</b>		\$6,792,000	
Total Capital Value in Fee Basis		\$6,792,000	
<b>Allocation of Capital Cost by Sector</b>	<b>Buildings</b>	<b>Capital Equipment</b>	<b>Total</b>
Non-Residential @ 56%	Fire Station	\$3,803,520	\$3,803,520
Residential @ 44%	Buildings Not Included in Fee Basis	\$2,988,480	\$2,988,480
Total		\$6,792,000	\$6,792,000
<b>Service Base and Unit Cost</b>	<b>Existing Service Base 2014-15</b>	<b>2040 Service Base and Cost Allocation</b>	<b>Average Capital Investment</b>
Non Residential Development Gross Floor Area	12,490,000	15,696,000	
Population (Residential Demand Base)	13,557	16,115	
Non-Residential Capital Cost Per Gross Sq. Ft.		\$0.24	<b>\$0.24</b>
Average Residential Cost Per Capita		\$185	\$185
Residential Cost Per Unit (Average Unit, Occupied)			<b>\$389</b>
<b>Residential Cost Per Sq. Ft. Living Area</b>	<b>Average Living Area Per Unit</b>	<b>Average Calls Per 1000 Sq. Ft. Per Year</b>	<b>Impact Fee Per Sq. Ft. Living Area</b>
All Housing Types	1,290	0.133	\$0.30
Single Family Units	1,757	0.098	<b>\$0.22</b>
All Other Housing Units	957	0.190	<b>\$0.43</b>
<b>Non-Residential Impact Fees Per Sq. Ft. Gross Area</b>	<b>Call Rate Multiplier Relative to Avg Non Residential Per 1000 Sq. Ft. Gross Area</b>		<b>Impact Fee Per Sq. Ft. Gross Area</b>
Average Non-Residential	1.00		\$0.24
Retail, Restaurants, Lodging	1.22		<b>\$0.29</b>
Offices and Commercial Services	0.78		<b>\$0.19</b>
Industrial, Transportation, Whse, Communic.	0.44		<b>\$0.11</b>
Nursing Homes & Licensed Care Facilities	1.56		<b>\$0.37</b>
Other Institutional Uses	1.22		<b>\$0.29</b>

#### 4. Fire Department Impact Fee Schedule

The Fire Department impact fee is based on the recoupment of a portion of the City's investment in the major capital equipment necessary to provide adequate coverage throughout the City to existing and anticipated development.

The resulting impact fees are assessed per square foot of building area. (See Table 25.) For the purpose of residential assessment, the fee is applied per square foot of gross living area. For non-residential uses the fee is assessed per square foot using the gross floor area of buildings.

**Table 25**

<b>Fire Department Impact Fee Schedule</b>	
<b>Residential Development</b>	<b><i>Per Sq. Ft. Living Area</i></b>
Single Family Detached	<b>\$0.22</b>
All Other Housing Units	<b>\$0.43</b>
<b>Non-Residential Development</b>	<b><i>Per Sq. Ft. Gross Area</i></b>
Retail, Restaurants and Lodging	<b>\$0.29</b>
Offices and Commercial Services	<b>\$0.19</b>
Industrial, Transportation, Whse, Communic.	<b>\$0.11</b>
Nursing Homes & Licensed Care Facilities	<b>\$0.37</b>
Other Institutional Uses	<b>\$0.29</b>

The above fee schedule is based solely on the capital cost of major vehicles and apparatus of the Fire Department. In future updates, the estimated replacement cost of the equipment inventory may be adjusted to reflect current costs, while the listed inventory may also be amended to include additions to the inventory. The impact fee model can also be adapted in future updates to include fire station space in the capital cost basis.

# IMPACT FEE SCHEDULE INCLUDING FIRE DEPARTMENT

Structure Type or Use	Impact Fees Per Square Foot - 2016 Update				
	Schools	Recreation	Police Dept	Fire Dept	Total
<b>Residential Development</b>					
	<i>Per Sq. Ft. Gross Living Area</i>				
Single Family Detached	\$1.15	\$0.65	\$0.23	\$0.22	\$2.25
All Other Housing Units	\$1.02	\$0.93	\$0.32	\$0.43	\$2.70
<b>Non-Residential Development</b>					
	<i>Per Sq. Ft. Gross Floor Area</i>				
Retail, Restaurants and Lodging	---	\$0.12	\$0.27	\$0.29	\$0.68
Offices and Commercial Services	---	\$0.21	\$0.13	\$0.19	\$0.53
Industrial, Transportation, Whse, Communic.	---	\$0.09	\$0.07	\$0.11	\$0.27
Nursing Homes & Licensed Care Facilities	---	\$0.06	\$0.04	\$0.37	\$0.47
Other Institutional Uses	---	\$0.06	\$0.27	\$0.29	\$0.62

## FEES PER SQUARE FOOT APPLIED TO AVERAGE SIZE HOUSING UNITS IN LEBANON

COMPARISON OF RESIDENTIAL IMPACT FEES PER UNIT FOR THE TWO STRUCTURAL CLASSES APPLYING THE FEE SCHEDULE PER SQUARE FOOT TO AVERAGE SIZE DWELLINGS						
Capital Facility Category:	Schools	Recreation	Police	Fire	Total	
<b>Schedule Applied to Avg Size Units in Lebanon</b>						
Single Family Detached: 1,757 Sq. Ft.	\$2,021	\$1,142	\$404	\$387	\$3,954	
All Other Structure Types: 955 Sq. Ft.	\$974	\$888	\$306	\$411	\$2,579	
<b>Schedule Applied to Avg Units Built 2000 or Later</b>						
Single Family Detached: 2,173 Sq. Ft.	\$2,499	\$1,412	\$500	\$478	\$4,889	
All Other Structure Types: 1,157 Sq. Ft.	\$1,180	\$1,076	\$370	\$498	\$3,124	
<b>Ratio: Avg Fee for "All Other" to Fee for SFD</b>						
Based on Square Footage of All Units	48%	78%	76%	106%	65%	
Based on Square Footage of Newer Units	47%	76%	74%	104%	64%	

*Although residential impact fees are higher per square foot for structure types other than single family homes, the average assessment per housing unit for "other structure types" will be about 35% less than the typical fees due on a single family home.*